

## Head Lice

Standard treatments for head lice are available without prescription. Products such as RID and NIX are usually effective. The products contain permethrin, natural pyrethrins, or organochlorine insecticides. Remaining nits should be combed out after loosening them with an application of "Step 2" lotion or dilute vinegar. Shampooing with Selsun shampoo will further help to clear up any residual lice and nits.

During recent years, an increase in head lice treatment failures has been reported in different areas of the world. Most failures to cure the head lice come from re-infection or not following the package directions.

However, there also has been a recent increase in the lice resisting these agents. We don't know why this has happened, but the lice are becoming more immune to the insecticides. It appears that the products containing Permethrin are more prone to the resistance problems. Many cases will respond to higher concentrations of the same product. Elimite is prescription form of Permethrin that is 5 times more potent. Applied as a cream overnight, it is usually effective when non-prescription products fail.

Oral treatment with ivermectin has been recently used in the treatment of head lice infestation that is resistant to other treatments. Ivermectin is an antiparasitic drug discovered in the early 1970s and has been widely used in the treatment of intestinal parasites (worms) in man and animals. The FDA has not yet specifically approved it for head lice treatment.

Ivermectin is toxic to only to arthropods (bugs) and nematodes (worms), in which it induces paralysis of the pharynx and leads to starvation that may subsequently kill the parasite. There have not been adequate studies to establish the drug's safety in pregnant women or in children weighing less than 30 pounds, but there are no known serious side effects. A single dose is about 75% effective. The results are better when ivermectin is used in combination with the LiceMeister comb (manufactured by the National Pediculosis Association, [www.licemeister.org](http://www.licemeister.org)) and when all the family members are treated. The medication can be made into a cream (10mg of ivermectin in 30 ml of vegetable oil -- leave on scalp over night) for those not wishing to take it internally.

Topical Malathion has recently been added to FDA approved treatments for head lice and may be effective.